Societies and Academies.

PARIS.

Academy of Sciences, January 24.—M. Georges Lemoine in the chair.—The president announced the death of M. Georges Humbert, member of the Academy.—P. **Termier** and L. **Joleaud**: The age of the phenomena of transport in the mountains of Gigondas (Vaucluse).—G. **Gouy**: A theorem of geometrical optics and its application to systems of prisms.—M. Pierre Bazy was elected a member of the section of medicine and surgery in succession to M. Guyon.—J. **Andrade**: The transverse elastic displacements of the centre of gravity of a cylindrical spiral and its doublets.—C. **Féry**: A mechanical clock with free escapement.—A. **Liénard**: The electromagnetic energy and thermodynamic potential of a system of currents.—G. **Reboul**: A new property of bodies poor conductors of electricity. An attempt to discover the causes of phenomena described in an earlier communication.—M. **Collignon**: The propagation of the sound of guns to great distances. The annual periodicity. Confirmation of results given in a previous communication: the law of annual periodicity has been verified up to November 18, 1918.—L. **Forsén**: The systematic nomenclature and constitution of the derivatives of molybdic acid. Representing molybdic acid by the formula

$$H_6Mo_3O_{12}.(3H_2MoO_4),$$

the composition of the complex salts of molybdates can be satisfactorily represented.—E. **Rengade**: The isothermal concentration of a solution prepared starting with two salts with different ions. A study of the compositions of the solution and deposited salts produced by the isothermal evaporation at 25° C. of a solution of ammonium nitrate and sodium chloride.—Mlle. J. **Bonnefoy** and J. **Martinet**: 6-Methylisatin. Two new methods are given for the preparation of this compound, the first starting with metatoluidine and methyl mesoxalate, and the second with metatoluidine, carbon bisulphide, and hydrogen peroxide.—E. E. **Blaise**: Derivatives of 1:4-diketones and semicarbazide. The primary product of the reaction between the diketone and semicarbazide is a disemicarbazone; this is readily converted in formic acid solution into an *N*-ureo-pyrrol.—G. **Mignonac**: A new general method for the preparation of amines, starting with aldehydes or ketones. The aldehyde or ketone is dissolved in an alcoholic solution of ammonia, finely divided nickel added, and the mixture kept violently shaken, treated with hydrogen at atmospheric pressure. Examples of the application of the method are given.—P. **Glangeaud**: The mountains of Margeride: their porphyric eruptions, cycles of erosion, and glaciers.—J. **Savornin**: The distribution and direction of the phosphate basins in western Morocco. The deposits of Beni Meskine and Oulad Delim are rich, very extensive, and of great commercial importance. The other basins described are only of theoretical interest.—A. **Lumière**: The harmful action of dead leaves on germination. A study of the substances extracted from dead leaves by water showed the presence of reducing substances capable of preventing the germination of seeds. Numerous successive extractions were required before these substances were completely removed. From these observations it is supposed that after the fall of the leaves rain-water extracts these harmful substances during the winter, thus partially sterilising the soil and removing oxygen, and it is only after the lapse of a certain period of time that sufficient oxygen is present in the soil to permit the germination of seeds.—G. **Tanret**: The presence of quinic acid in the leaves of some conifers. The leaves of the cedar collected in July contain 5 gm. of quinic acid per kg. of dried leaves. Similar results were obtained with larch leaves, but the examination of other conifers gave no quinic acid.—A. **Magnan**: The action of the water on the body and head of diving birds.—C. **Dekhuyson**: The biological semi-permeability of the external walls of the Sipunculideæ. Experiments are described which show that the external walls of *Phascolosoma vulgare* and *Sipunculus nudus* are semi-permeable in so far as pure water, carbon dioxide, and oxygen pass through with much greater velocity than salts in solution.—P. **Goy**: The lower plants and the accessory factors of their growth. From studies of the growth under varying conditions of several species of yeasts, moulds, and bacilli, the conclusion is drawn that vitamines are not indispensable to the lower plants, but that their evolution is considerably influenced by the presence of an organic body which has been isolated in a pure crystallisable state from cultures of *Mucor mucedo*. This substance is not an amino-acid, and contains neither nitrogen nor phosphorus.—H. **Bierry** and F. **Rathery**: Diabetes and glycemia.

Books Received.

Klimatographie von Osterreich. VII.: Klimatographie der Bukowina. By Dr. V. Conrad. Pp. 42. VIII.: Klimatographie von Mähren und Schlesien. By H. Schindler. Pp. 125. IX.: Klimatographie von Oberösterreich. By P. T. Schwarz. Pp. 133. (Wien: Gerold & Co.)

Annuaire de l'Observatoire Royal de Belgique, 1922. Pp. vi+316. (Bruxelles.)

The Flowering Plants of South Africa. Edited by Dr. I. B. Pole Evans. Vol. i., No. 2, February. Plates 11–20. (London: L. Reeve and Co., Ltd.; Johannesburg and Cape Town: Speciality Press, Ltd.) Coloured, 15*s.*; plain, 10*s.*

The Theory of Relativity. By Prof. R. D. Carmichael. Second edition. Pp. 112. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd.) 8*s.* 6*d.* net.

Air Ministry, Meteorological Office. International Meteorological Conference. Report of Proceedings of the Fourth International Conference of Directors of Meteorological Institutes and Observatories and of the International Meteorological Committee, Paris, 1919. (M.O. 239.) Pp. 84. (London: Meteorological Office.)

Report of the Secretary of the Smithsonian Institution for the Year ending June 30, 1920. (Publication 2586.) Pp. 110+i plate. (Washington: Government Printing Office.)

Department of the Interior. Bureau of Education. Bulletin No. 65, 1919: The Eyesight of School Children: Defective Vision as Related to School Environment, and Methods of Prevention and Correction. By J. H. Berkowitz. Pp. v+128+xvi plates. Bulletin No. 7, 1920: Requirements for the Bachelor's Degree. By W. C. John. Pp. v+313. Bulletin No. 29: The National Crisis in Education: An Appeal to the People. Edited by W. T. Bawden. Pp. 191. (Washington: Government Printing Office.)

Smithsonian Institution. Bureau of American Ethnology. Bulletin 67: Alsea Texts and Myths. By L. J. Frachtenberg. Pp. 304. (Washington: Government Printing Office.)

Truth about Venereal Disease. By Dr. Marie C. Stopes. Pp. vii+52. (London: G. P. Putnam's Sons.) 1*s.* 6*d.* net.

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Ministry of Finance, Egypt. Note on the Programme and Policy of the Government with Regard to the Investigation and Development of the Petroleum Resources of Egypt. By E. M. Dowson. Pp. v+48. (Cairo: Government Press.) P.T. 10.

Transactions of the Royal Society of South Africa. Vol. ix., part 2, 1921. (Cape Town: The Society; London: W. Wesley and Son.) 18*s*. 6*d*.

Products of the Empire. By L. Clinton Cunningham. Pp. 299. (Oxford: Clarendon Press.) 5*s*. 6*d*. net.

Why do We Die? By T. Bodley Scott. Pp. 123. (London: T. Fisher Unwin, Ltd.) 6*s*. net.

Calendario della Basilica Pontificia del Santissimo Rosario in Valle di Pompei per l'Anno 1921. Pp. 224+63. (Valle di Pompei.)

Elements of the Mathematical Theory of Electricity and Magnetism. By Sir J. J. Thomson. Fifth edition. Pp. viii+410. (Cambridge: At the University Press.) 30*s*. net.

The Dynamical Theory of Gases. By Prof. J. H. Jeans. Third edition. Pp. vii+442. (Cambridge: At the University Press.) 30*s*. net.

The Scientific Papers of Bertram Hopkinson. Collected and arranged by Sir J. Alfred Ewing and Sir Joseph Larmor. Pp. xxvii+480+plates. (Cambridge: At the University Press.) 63*s*. net.

Handbuch der Anorganischen Chemie. Edited by Prof. R. Abegg and Dr. Fr. Auerbach. Vierter Band. Erste Abteilung. Zweite Halfte. Pp. xiii+1072. (Leipzig: S. Hirzel.) 140 marks.

Agriculture and Irrigation in Continental and Tropical Climates. By Kinsley D. Doyle. Pp. xv+268. (London: Constable and Co., Ltd.) 19*s*. net.

Instinct in Man: A Contribution to the Psychology of Education. By Dr. J. Drever. Second edition. Pp. x+293. (Cambridge: At the University Press.) 10*s*. 6*d*. net.

Proceedings of the Cambridge Philosophical Society. Vol. xx., part 2. (Michaelmas Term, 1920.) Pp. 219–83. (Cambridge.) 5*s*. net.

An Introduction to Bacterial Diseases of Plants. By Erwin F. Smith. Pp. xxx+688. (Philadelphia and London: W. B. Saunders Co.) 50*s*. net.

Principles and Methods of Industrial Education. By W. H. Dooley. Pp. xi+257. (London and Sydney: G. G. Harrap and Co., Ltd.) 6*s*. net.

Psyche's Lamp: A Revelation of Psychological Principles as Foundation of all Thought. By Robert Briffault. Pp. 240. (London: G. Allen and Unwin, Ltd.; New York: The Macmillan Co.) 12*s*. 6*d*. net.

Studies in French Forestry. By Theodore S. Woolsey, jun. Pp. xxvi+550. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd.) 36*s*. net.

Ou en est l'Astronomie. By l'Abbé Th. Moreux. Pp. vi+295. (Paris: Gauthier-Villars et Cie.)

Annuaire pour l'An 1921 publié par le Bureau des Longitudes. Pp. viii+710+A42+B17+C69. (Paris: Gauthier-Villars et Cie.) 8 francs net.

Memoirs of the Connecticut Academy of Arts and Sciences. Vol. vii.: The Appendages, Anatomy, and Relationships of Trilobites. By Dr. Percy E. Raymond. Pp. 169+xi plates. (New Haven, Conn.: Yale University Press.) 6 dollars.

A Research on the Eucalypts, Especially in Regard to their Essential Oils. By Richard T. Baker and Henry G. Smith. Second edition. Pp. xv+471+plates. (Sydney: Technological Museum.)

Perspective: The Practice and Theory of Perspective as Applied to Pictures, with a Section dealing with its Application to Architecture. By Rex Vicat Cole. Pp. viii+17–279. (London: Seeley, Service and Co., Ltd.) 18*s*. net.

A Diplomat in Japan: The Inner History of the Critical Years of Japan when the Ports were Opened and the Monarchy Restored. By the Right Hon. Sir Ernest Satow. Pp. 427. (London: Seeley, Service and Co., Ltd.) 32*s*. net.

The Copernicus of Antiquity (Aristarchus of Samos). By Sir Thomas Heath. (Pioneers of Progress: Men of Science.) Pp. iii+59. (London: S.P.C.K.; New York: The Macmillan Co.) 2*s*. 6*d*. net.

Early Annals of Ornithology. By J. H. Gurney. Pp. viii+240. (London: H. F. and G. Witherby.) 12*s*. 6*d*. net.

Ministry of Finance, Egypt. Survey Department. Meteorological Report for the Year 1913. Pp. xiv+240+xii. (Cairo: Government Press.) P.T.30.

Imperial Mineral Resources Bureau. The Mineral Industry of the British Empire and Foreign Countries (War Period). Antimony (1913–19). Pp. 34. (London: H.M. Stationery Office.) 1*s*. net.

An Introduction to Technical Electricity. By S. G. Starling. Pp. xii+181. (London: Macmillan and Co., Ltd.) 3*s*. 6*d*.

A Book of Gardening for the Sub-Tropics. By Mary Stout and Madeline Agar. Pp. 200. (London: H. F. and G. Witherby.) 6*s*. net.

Bergens Museums Aarbok, 1918–19. I Hefte. Naturvidenskabelig Roekke. Pp. 76+37+86+vii plates. (Bergen.)

An Account of the Crustacea of Norway. By G. O. Sars. Vol. vii.: Copepoda. Supplement. Parts vii. and viii.: Harpacticoida (continued). Pp. 73–92+xlix–lxiv plates. (Bergen: Bergen Museum.)

Diary of Societies.

THURSDAY, February 17.

Royal Institution of Great Britain, at 3.—Prof. W. A. Herdman: Oceanography (The Sea-Fisheries).

Royal Society, at 4.30.—Dr. C. Chree: A Comparison of Magnetic Declination Changes at British Observatories.—Prof. H. M. Macdonald: The Transmission of Electric Waves Around the Earth's Surface.—Prof. T. H. Havelock: The Stability of Fluid Motion.—Prof. W. H. Young: The Transformation of Integrals.—J. L. Haughton and Kathleen E. Bingham: The Constitution of the Alloys of Aluminium, Copper, and Zinc containing High Percentages of Zinc.

Royal College of Physicians of London, at 5.—Dr. Martin Flack: Respiratory Efficiency in Relation to Health and Disease (Milroy Lecture).

Linnean Society, at 5.—Prof. G. B. De Toni: A Contribution to the Teratology of the Genus Datura.—Capt. J. Ramsbottom and A. J. Wilmott: A Plant Collection from Macedonia.—Dr. G. C. Druce: Shetland *Plantago* and Other Plants from the Northern Isles.

Royal Society of Medicine (Dermatology Section), at 5.

Royal Aeronautical Society (at Royal Society of Arts), at 5.30.—F. Handley Page: The Handley Page Wing.

Institution of Mining and Metallurgy (at Geological Society), at 5.30.—E. H. Clifford: A Scheme for Working the City Deep Mine at a Depth of 7000 ft.

Institution of Electrical Engineers (at Institution of Civil Engineers), at 6.—Prof. E. Wilson: Magnetic Susceptibility of Low Order: I. Instrumentation.

Institution of Automobile Engineers (London Graduates' Meeting) (at 28 Victoria Street), at 7.30.—E. L. Bass: Engine Lubrication.

Chemical Society, at 8.—L. J. Hudleston and H. Bassett: Equilibria of Hydrofluosilicic Acid. Part I. Mixtures of Hydrofluosilicic and Hydrofluoric Acids.—R. G. Fargher and H. King: Additive Compounds of Antipyrylaminodiacetic Acid and its Salts with Neutral Salts.—H. Bassett and T. A. Simmons: The System, Picric Acid—Phenyl Acridine.—F. S. Kipping: Organic Derivatives of Silicon. Part XXIV. *dl*-Derivatives of Silicoethane.—F. W. Atack: The Structural Isomerism of Oximes. Part I. Criticism of the Hantzsch-Werner Hypothesis of the Geometrical

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